

Appl. No. 10/816,064
Amdt. Dated , April 7 , 2006
Reply to Office Action of January 09, 2006

REMARKS/ARGUMENTS

This amendment is responsive to the Office Action mailed January 9, 2006. In the Office Action, claims 2, 4, 5, 19, 29, 31, and 59-61 were rejected, claims 6-17, 20-25, 32-43 and 62 were objected to as being dependent upon a rejected base claim, but were deemed allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims, and claims 3, 18, 26, 27, 30, 45, 46 and 49 were allowed. By this amendment claims 2 and 29 have been cancelled, claims 19, 20 and 62 have been amended and new claims 63 and 64 have been added. No new matter has been added. Claims 3-27, 30-43, 45, 46, 49, 59-64 remain pending. Reconsideration in light of the amendment is respectfully requested.

The Applicant also respectfully submits that the claims 20 and 62 have been amended to overcome the objections due to certain informalities as suggested by the Examiner.

Drawing Objections

Drawings were objected to under 37 CFR 1.83 (a) for not showing "carbon-based emitter" and other different types of emitters as claimed in independent claim 1, "plurality of detector elements of more than one sizes" as claimed in claim 3 and 30, "full ring sources including ...a rectangle, a square, an ellipse and an oval configuration" as claimed in claim 5, and "at least two stationary detectors extending generally around at least portion of an imaging volume" as claimed in claim 61. The Applicant respectfully traverses the objections to drawings.

The Applicant respectfully submits that 37 CFR 1.81 (a) states:

The applicant for a patent is required to furnish a drawing of his or her invention **where necessary** for the understanding of the subject matter sought to be patented. (emphasis added)

The Applicant respectfully submits that the Specification clearly describes the emitters in paragraphs [0040] and [0045], and in paragraph [0046] specifically states about different types of available emitters as recited in claims 63 and 64. Similarly "detector elements of more than one sizes " is supported in the specification in paragraph [0051] and is believed to be well understood to those skilled in the art. The full ring sources including rectangle and other shapes are also well understood by those skilled in the art. It would be sufficiently clear to one skilled in the art to envisage the different types of emitters, detector elements of more than one sizes, and ring sources of different shapes and, hence, a drawing is not necessary for the understanding of these

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claim features. With respect to two stationary detectors as claimed in claim 61, Figs 6 and 7 show two ring detectors.

Applicant therefore kindly requests withdrawal of the drawing rejections.

Claims define allowable subject matter over the applied art

Claims 2, 29, 59-61 were rejected under 35 U.S.C. §102 (e) as being anticipated by Zhou et al. (U.S. Patent Publication No. 2002/0094064A1, hereinafter "Zhou"). Applicant has carefully reviewed the applied reference, and has cancelled the independent claims 2 and 29. However, Applicant respectfully traverses the rejection for claims 59-61. To anticipate a claim under 102, each and every element of the claim must be taught by the reference.

Claim 59 depends from independent claim 4 which recites "...stationary distributed X-ray source includes **at least two full ring sources**". Zhou describes a computed tomography system having an annular X-ray source and an annular X-ray detector (column 2, lines 21-32). However, there is no disclosure, teaching or suggestion in Zhou about "two full ring sources" as recited in independent claim 4. Further Zhou also does not disclose "**detector elements having varying resolutions**" as recited in the claim 59.

Similarly regarding independent claim 60, Zhou does not disclose, teach or suggest the claim recitations of "**detector elements having varying resolutions**" and with respect to claim 61 Zhou does not disclose, teach or suggest "**at least two stationary detectors**".

Zhou describes in paragraph 58 the different detector configurations, however nowhere does Zhou disclose, teaches or suggests that the detector elements have varying resolutions nor the two detector configuration is employed anywhere in the apparatus described in Zhou. The Examiner has referred to "two-dimensional array" as a teaching for varying resolution, however, the Applicant respectfully submits that the two-dimensional array simply qualifies the structural organization of detector elements, in a two-dimensional array, all the elements are generally of the same resolution. There is no disclosure, teaching or suggestion in Zhou that the detector elements are of varying resolutions as recited in the independent claim 60. Regarding the claim recitation of "at least two stationary detectors", the Examiner has referred to the "rows of two dimensional detector" in Zhou as a teaching for "two stationary detectors". Again, the Applicant would like to respectfully submit that the "rows" in a two-dimensional detector cannot be construed as "at least two stationary detectors" as recited in the claim 61 and as clearly distinguishable in Figs. 6 and 7 and supported in paragraph 58 of the Applicant's application. Thus claims 59-61 are not anticipated by Zhou.

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Claims 4-5 and 31 were rejected under 35 U.S.C. §102 (b) as being anticipated by Burke et al (U.S. Patent No.5438605, hereinafter "Burke"). Burke does not disclose, teach or suggest the claim recitation of " wherein the at least one stationary distributed X-ray source includes **at least two full ring sources**" as recited in the independent claims 4, and 31.

Burke describes a toroidal X-ray tube housing with an annular anode (see, Abstract). Examiner has referred to Fig. 7 in Burke and the reference numerals 12, 12' and 12", as a teaching for "two full ring sources". However the Applicant would like to respectfully submit that nowhere in the description of Fig. 7 (column 9, lines 22-40) does Burke disclose, teaches or suggests "two full ring sources". Fig. 7 in Burke shows a stepped configuration of multiple anodes and cathode cups mounted on an annular ring 30. The reference numeral 12, 12', and 12" indicate "**cooling passages**" and not "**full ring sources**" as recited in the independent claims 4, and 5. Burke, in Fig. 7 and elsewhere only discloses a single annular X-ray source, and nowhere does Burke disclose, teaches or suggests "two full ring sources". Thus claims 4 and 31 are not anticipated by Burke. Claim 5 depends from independent claim 4 and is similarly distinguishable over the applied reference.

Claim 19 was rejected under 35 U.S.C. §102 (b) as being anticipated by Flohr (U.S. Patent No. 5654995, hereinafter "Flohr"). Claim 19 has been amended to recite more than one partial ring sources. Applicant respectfully traverses the rejection. Flohr does not disclose, teach or suggest the claim recitation of "**partial ring sources flanking the stationary ring detector on alternating sides of the stationary ring detector**" as recited in the amended claim 19.

Flohr describes an annular X-ray source (designated by reference numeral 2) and a ring anode (designated by reference numeral 3), see column 2, lines 21-23. In one of the embodiments Flohr discloses that the ring anode 3 may be a partial ring or a full ring (column 3, lines 4-6). However, there is no disclosure, teaching or suggestion in Flohr about the **partial ring sources flanking the stationary detector on alternating sides**. Fig. 1 shows the X-ray source only on one side of the detector. There is no disclosure, teaching or suggestion about employing more than one partial ring source in Flohr. Therefore, claim 19 is not anticipated by Flohr.

Accordingly, Applicant respectfully submits that independent claims 4, 19, 31, 60, and 61, define allowable subject matter over the applied art. Claims 5 and 59 depend from the Independent claim 4, and are similarly allowable.

New claims 63 and 64 depend from allowable independent claims 3 and 30 and should be similarly allowable.

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In view of the foregoing remarks, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. §102 (e) and U.S.C. §102 (b).

Summary

In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact Applicant's undersigned representative at the telephone number below.

Respectfully submitted,

By 

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